

-15-

REMARKS

In response to the Office Action mailed on March 28, 2005, Applicants respectfully request reconsideration. To further the prosecution of this Application, Applicants submit the following amendments as well as remarks discussing patentability of rejected and newly added claims.

Claims 1-30 were previously pending in the subject Application. Claims 31-35 are being added by way of this amendment. Thus, after entry of this Amendment, claims 1-35 will be pending. No new matter was added to the application when adding the new claims.

The following remarks address the rejections of claims 1-30 as set out in the present Office Action as well as patentability of newly added claims 31-35. Applicants respectfully request reconsideration.

Rejection of Pending Claims 2, 8-9, and 12 under 35 U.S.C. §112

In response to the present rejections, Applicants have amended claims 2, 8-9, and 12 to provide for the proper antecedent basis.

Rejection of Pending Claims 1-30 under 35 U.S.C. §102(e)

The Examiner has rejected originally submitted claim 1 under 35 U.S.C. §102(e) as being anticipated by Young (U.S. Patent 6,782,531). The Office Action likens elements in Young to those in claim 1 to reject the claimed invention. Applicants have amended claim 1 to include certain limitations found in pending dependent claims. In particular, claim 1 recites the technique of querying the plug-in modules to learn of dependency information as generally found in claims 3, 4, and 5. Thus, no new matter has been presented in the pending claims.

In general, Young discloses a method for ordering an execution of plug-in modules. The plug-in modules of Young have a dependency such that a first plug-in module requires input from a second plug-in module. Accordingly, a respective management framework according to Young initiates execution of the plug-in modules so that the second plug-in module is executed before the first plug-in module. However, Applicants of the present application are not claiming this as their invention.

For example, the claimed invention (e.g., now amended claim 1) recites: "based on queries to the plurality of plug-in modules, retrieving a dependency list indicating respective plug-in services provided by, and required by, each plug-in module identified in the identities of a plurality of plug-in modules".

Applicants respectfully submit that the cited passages to reject the claimed invention provide no literal support or suggestion of retrieving a dependency list based on queries to the plug-in modules. This claimed technique enables the plug-in modules themselves to provide dependency information of what other plug-in modules to execute rather than relying on efforts of the execution management framework as in Young to track such information for all plug-ins via a configuration file. Thus, Applicants respectfully request the withdrawal of the respective rejection of claim 3 under 102(e) should be withdrawn.

For the reasons stated above, Applicants submit that claim 1 includes limitations not found in any of the cited references and therefore is patentably distinct and advantageous over the cited prior art. Applicants respectfully request the withdrawal of the rejection of claim 1 under 35 U.S.C. §102(e) or request that the Examiner more particularly point out passages in Young that teach the claimed invention. Accordingly, allowance of claim 1 is respectfully requested.

Because claims 2-14 depend from and further limit claim 1, Applicants submit that claims 2-14 are in allowable condition as well.

Applicants have amended claim 15 to include similar limitations as discussed above for claim 1. Thus, no new matter has been presented in the pending claims. Accordingly, Applicants respectfully submit that claim 15 includes similar patentable distinctions over the cited prior art as does claim 1. Thus, Applicants respectfully request allowance of claim 15 as well as corresponding dependent claims 16-28.

Applicants submit that claim 3 includes limitations not disclosed by Young. For example, claim 3 recites “receiving a dependency response from the plug-in module...” The Office Action cites column 13, lines 50-53 to reject this portion of claim 3 of the subject application. The cited language in Young reads as follows:

“The configuration file holds information associated with each node in the graph 600 as needed to execute the plug-in, including information specifying the number of other plug-ins on which each plug-in depends. The stage uses that information in executing the plug-ins in the correct order. At any given time, it might be possible to execute more than one plug-in: if two plug-ins do not depend on each other, the two plug-ins can be executed in any order, or can be executed simultaneously (i.e., in parallel during the same clock cycle) by multiple threads. Therefore, for instance, if a plug-in will take a long time to execute because it must wait on the results of a database query by another plug-in, the pipeline infrastructure can execute other plug-ins in the mean time. At any time, any plug-in that has zero dependencies can be executed.” (emphasis added)

Applicants respectfully submit that this passage provides no literal support or suggestion that any plug-in module as in Young provides “a dependency response from a plug-in module...indicating respective plug-in services provided

by, and required by, the plug-in module” as in the claimed invention. The cited language in Young provides no indication whatsoever that the cited prior art's plug-in modules provide dependency information to the configuration manager. Nor is there any indication in the cited reference that any plug-in module itself provides an indication of services supported by the plug-in module. This claimed technique enables the plug-in modules themselves to provide dependency information of what other plug-in modules to execute rather than relying on efforts of the execution management framework to track such information for all plug-ins via a configuration file. Thus, Applicants respectfully request the withdrawal of the respective rejection of claim 3 under 102(e) should be withdrawn.

Applicants submit that claim 4 includes limitations not disclosed by Young. For example, claim 4 recites “passing plug-in initiation information to the plug-in module for use by the plug-in module.” The Office Action cites column 8, lines 31-32 to reject this portion of claim 4 of the subject application. The cited language in Young reads as follows:

“The stage configuration module passes the plug-in configuration information to an execution management framework 425. The execution management framework 425 uses this information to determine which of the plug-ins nos. 1-8 can be processed in parallel (and during the same clock cycles per clock 420) and which of the plug-ins nos. 1-8 need to be processed in sequence after other plug-ins because they depend on a final or intermediary result from the other plug-ins.”
(emphasis added)

Applicants respectfully submit that this passage provides no literal support that an instantiator (e.g., execution management framework) passes plug-in information to any plug-in module. For example, the execution management framework is not equivalent to the plug-in modules. Young differentiates plug-ins

from the execution management framework at column 7, lines 41-47 which reads:

“Each of the stages 202, 204, 206 coordinates the execution of a number of processing modules ("plug-ins") 220, supported by an execution management framework 225. The plug-ins 220 can be viewed as plugging into and out of the execution management framework 225, depending on computational requirements.”

The cited language in Young therefore provides no indication whatsoever that the cited prior art's execution management framework passes plug-in information for use by the respective plug-in module, especially plug-in initiation information. Thus, Applicants respectfully request the withdrawal of the respective rejection of claim 4 under 102(e) should be withdrawn.

Applicants submit that claim 5 includes further limitations not disclosed by Young. For example, claim 5 recites “querying a dependency interface ... to obtain the dependency response from the plug-in module.” The Office Action cites column 13, line 61. This cited passage merely indicates that a plug-in may need to wait on a database query by another plug-in module. There is no indication that the query is for the purpose of obtaining dependency information. The cited passage therefore does not teach or suggest the claimed invention. Thus, Applicants respectfully request the withdrawal of the respective rejection of claim 5 under 102(e) should be withdrawn.

Applicants submit that claim 10 includes limitations not disclosed by Young. For example, claim 10 recites “forwarding to the respective plug-in module, via a dependency available interface associated with the respective plug-in module, the identity of each initiated plug-in service required by the respective plug-in module.” The Office Action cites column 8, lines 31-32 to

reject this portion of claim 10 of the subject application. The cited language in Young reads as follows:

“The stage configuration module passes the plug-in configuration information to an execution management framework 425.”

Applicants respectfully submit that this passage provides no literal support associated with forwarding an identity of each initiated plug-in service required by the plug-in module. The execution management framework oversees execution of the plug-in modules. Thus, passing information to the execution management framework is not equivalent to passing information to directly to the plug-in modules. This claimed technique enables the plug-in modules to manage themselves rather than rely on an “execution management framework” as in Young. Thus, Applicants respectfully request the withdrawal of the respective rejection of claim 10.

Applicants submit that claim 13 includes further limitations not found in Young. For example, the claimed invention of claim 13 recites: “wherein the first plug-in module is initiated via the step of initiating operation of plug-in modules after initiation of the second plug-in module, and wherein the second plug-in module includes a wait-state operation causing the second plug-in module to wait to provide the service offered by the second plug-in module until initiation of the first plug-in module.”

The passages cited by the Examiner to reject claim 13 include Young at column 13, lines 28-30 which read as follows:

“As noted above, plug-ins can be implemented as modular pieces of code that are executed during run-time for performing a defined task, such as a sub-computation on session data. Usually, the plug-ins need to be executed in a

certain, specified order to effectuate the desired, overall computation performed by the stage that contains them. A complexity is introduced in specifying that order because plug-ins can be dependent on other plug-ins. Generally speaking, given two plug-ins M and N, if plug-in M computes the value x (as a final or intermediary result) and plug-in N requires the value x to perform its computation, then plug-in N depends on plug-in M. Plug-ins can be dependent on zero, one, two, or more, other plug-ins. In the above notation, because of the noted dependency between M and N, the stage infrastructure will wait for plug-in M to be executed before it starts execution of plug-in N. Plug-ins with zero dependencies can be executed immediately or at any other time, without regard to prior execution of other plug-ins.” (Emphasis added)

Based on the cited passage, Applicants submit that the claimed invention operates in a different manner than as mentioned in Young. For example, according to the cited passage, Young indicates that plug-in N depends from plug-in M and thus the management framework or “stage infrastructure” executes plug-in M first and “depending” plug-in N some time thereafter. In contradistinction, the claimed invention recites that the “depending” plug-in module is executed first, not second. In other words, the “depending” plug-in is executed before executing the plug-in on which it depends. Young recites an opposite configuration.

Additionally, note that claim 13 further recites inclusion of a wait state operation in the “depending” plug-in (e.g., the second plug-in module that utilizes services offered by the first plug-in) so that there is no longer a need to initiate execution of the plug-in modules in any particular order, even though a dependency exists. Young makes no mention of initiating execution of plug-ins in a reverse order. Nor does Young discuss a wait type of operation associated with a plug-in to receive services offered by another plug-in. Providing a wait-

state operation in Young would serve no useful purpose because it would not be necessary.

For the reasons stated above, Applicants submit that claim 13 includes limitations not found in any of the cited references and therefore is patentably distinct and advantageous over the cited prior art. Applicants respectfully request the withdrawal of the rejection of claim 13 under 35 U.S.C. §102(e) or request that the Examiner more particularly point out passages in Young that teach the claimed invention. Accordingly, allowance of claim 13 is respectfully requested. For similar reasons as discussed above for dependent claim 13, Applicants submit that claim 27 is also in condition for allowance.

Claim 30 has been amended to include similar limitations as pending claim 13. For applicable reasons as discussed above for claim 13, Applicants submit that claim 30 is patentable over the cited prior art.

Applicants have amended claim 29 to further recite “querying a dependency interface associated with the plug-in module with a dependency query to obtain a dependency response from the plug-in module, the dependency response indicating respective plug-in services provided by the plug-in module.” For similar reasons as discussed above for dependent claim 5, Applicants submit that claim 29 is now in condition for allowance.

New claims 31-35

Applicants submit new dependent claims 31-35 that depend from claim 29. Claims 31-35 include further distinctions over the cited prior art.

Support for newly submitted claim 31-32 can be found at page 5 lines 1-16 and elsewhere throughout the specification. Support for newly submitted claims 33-34 can be found at page 6 lines 6-16 and elsewhere throughout the specification. Support for newly submitted claims 35 can be found at page 10

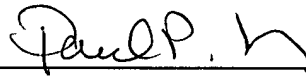
lines 16-22 and elsewhere throughout the specification. Applicant respectfully request allowance of these claims as well.

CONCLUSION

In view of the foregoing remarks, Applicants submit that the pending claims as well as newly added claims are in condition for allowance. A Notice to this affect is respectfully requested. If the Examiner believes, after reviewing this Response, that the pending claims are not in condition for allowance, the Examiner is respectfully requested to call the Representative.

Applicants hereby petition for any extension of time which is required to maintain the pendency of this case. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 50-0901.

Respectfully submitted,



Paul P. Kriz, Esq.

Attorney for Applicant(s)

Registration No.: 45,752

CHAPIN & HUANG, L.L.C.

Westborough Office Park

1700 West Park Drive

Westborough, Massachusetts 01581

Telephone: (508) 366-9600

Facsimile: (508) 616-9805

Customer No.: 022468

Attorney Docket No.: EMC01-11(01046)

Dated: June 1, 2005